IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Biran *et al.*	**Conf. No.:**	1660
Serial No.:	10/733,630	**Art Unit:**	2141
Filing Date:	12/11/2003	**Examiner:**	Nguyen, Quang N.
Title:	INCREASING TCP RE-TRANSMISSION PROCESS SPEED	**Docket No.:**	FIS920030278US1 (IBMF-0030)

COMMISSIONER FOR PATENTS

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Transmitted herewith is:
- **PRE-APPEAL BRIEF CONFERENCE REQUEST in 4 pages**
- **NOTICE OF APPEAL in 1 page**

in the above identified application.

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PRE-APPEAL BRIEF CONFERENCE REQUEST

Sir:

Applicants request a panel of experienced examiners perform a detailed review of appealable issues for the above-identified patent application pursuant to the Pre-Appeal Brief Conference program. Notice of Appeal has been filed together with this Request.

Applicants submit that the above-identified application is not in condition for appeal because the Office has failed to establish a *prima facie* case of obviousness due to errors in facts and in law. Claims 1-20 are pending in this application.

In the final Office Action, claims 1, 3-8, 10-15, and 17-20 are rejected under 35 U.S.C. 102(e), or in the alternative under 35 U.S.C. 103(a), as allegedly being unpatentable over Pazos (US 2005/0068896). Furthermore, claims 2, 9, and 16 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Pazos, in view of Elzur (US 2005/0172342). Applicants submit that these rejections are clearly not proper and without basis for the reasons stated below.

With respect to independent claims 1, 7 and 14, Applicants submit that Pazos fails to disclose each and every element of the claimed invention, including, "generating a first duplicate

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TCP acknowledgement (Ack) covering a received TCP segment that is determined to be valid by TCP and was dropped by TCP based on an upper layer protocol (ULP) decision." Claim 1; and similarly recited in claims 7 and 14 (emphasis ours). In support of its rejection, the Office asserts that paragraph [0007] of Pazos discloses this claimed feature. Office Action at 3; Advisory Action at 3. Specifically, the Office asserts that "one skilled in the art would readily appreciate that if the TCP receiver runs out of buffer for the received out-of-order TCP segments, the receiver will drop the received out-of-order TCP segments and process only the received in-order segments." Advisory Action at 3, citing Pazos at ¶ [0007]. Applicants respectfully traverse this assertion because the Office misinterprets Pazos. Applicants submit that Pazos is merely another example of existing TCP retransmission schemes based on duplicate ACKs. That is, Pazos conducts TCP receive processing according to considerations of the TCP layer alone, as is conventional. As a result, the duplicate ACKs disclosed by Pazos are just a way to utilize the existing fast retransmit algorithm. Pazos, however, fails to disclose or suggest any involvement of an upper layer protocol in the decision to drop the received TCP segment. This feature, *inter alia*, is not disclosed or suggested, and therefore represents an error in the rejection, making the application not in condition for appeal.

To further explain the technology, as is known in the art, TCP receive processing is accomplished according to considerations of the TCP layer alone, wherein, for example, a duplicate ACK is sent either because the packet is invalid, or because the TCP layer drops the packet because it does not have the buffers at its own layer. For example, Pazos discloses that "...when data packets arrive out-of-order, the receiver issues a duplicate ACK. After the source receives a particular number of duplicate ACKs, it will assume that the next data packet in the sequence was lost and retransmits it." Pazos at ¶ 0050. However, neither Pazos nor the prior art
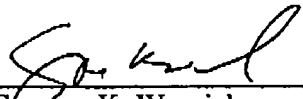
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of record disclose or suggest generating a first duplicate TCP acknowledgement (Ack) covering a received TCP segment that is determined to be valid by TCP and was dropped by TCP based on an upper layer protocol (ULP) decision. See claim 1 (emphasis added). After TCP accepts a packet, the claimed invention allows TCP to drop a packet for ULP-related reasons and to use TCP retransmit instead of ULP recovery. That is, for example, even though a second TCP segment has not been received, the transmitter knows that a first TCP segment, a valid TCP segment, was received and dropped due to a ULP consideration. See Specification, ¶ [0089]. Accordingly, this triggers a fast retransmit of the duplicate ACK, instead of the usual timeout retransmit, as disclosed by Pazos. Pazos at ¶ 0050. Applicants submit that Pazos fails to disclose or suggest, *inter alia,* "generating a first duplicate TCP acknowledgement (Ack) covering a received TCP segment that is determined to be valid by TCP and was dropped by TCP based on an upper layer protocol (ULP) decision." Claim 1. In Pazos, the ULP is not involved.

With further regard to the Advisory Action, the Office alleges that Applicants are relying on features that are not claimed. Applicant's respectfully submit that the Office's reliance on this tired line of reasoning is unfounded. The arguments presented in the After Final response were made to assist the Office in understanding the claimed invention. In this regard, Applicants have attempted to add to the Office's understanding by re-wording the claimed language and inserting examples. See After Final Response, at 7-9. It is therefore incorrect to characterize Applicants statements as arguing non-existent subject matter. The fact of the matter remains that Pazos fails to disclose or suggest the claimed invention including "generating a first duplicate TCP acknowledgement (Ack) covering a received TCP segment that is determined to be valid by

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TCP and was dropped by TCP based on an upper layer protocol (ULP) decision." Claim 1

(emphasis ours).

In view of the foregoing, Applicants submit that the Office has failed to state a *prima*

facie case of obviousness, and this application is not in condition for appeal and should either be

allowed as is, or re-opened for further prosecution.

Respectfully submitted,

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